

# COLLEGE OF ARTS & SCIENCES

## 2020-21 BS CHEMISTRY DEGREE PLAN

### FIRST YEAR - FRESHMAN (20-21)

| Fall Semester |       |                                      |             | Spring Semester |       |                                     |           |
|---------------|-------|--------------------------------------|-------------|-----------------|-------|-------------------------------------|-----------|
| Dept          | Crse# | Course Name                          | Hrs         | Dept            | Crse# | Course Name                         | Hrs       |
| MAT           | 120   | Precalculus <sup>2</sup>             | 4           | MAT             | 122   | Analytics & Calculus I              | 4         |
| CHE           | 121   | General Chemistry I                  | 3           | CHE             | 122   | General Chemistry II                | 3         |
| CHE           | 121L  | General Chemistry I Lab              | 1           | CHE             | 122L  | General Chemistry II Lab            | 1         |
| ENG           | 101   | English Composition I <sup>1</sup>   | 3           | ENG             | 102   | English Composition II <sup>1</sup> | 3         |
| BPH           | 100   | Special Topics in Science            | 0.5         | BIB             | 122   | Acts of the Apostles <sup>1</sup>   | 2         |
| BIB           | 121   | Life of Christ <sup>1</sup>          | 2           |                 |       |                                     |           |
|               |       | Other minor requirement <sup>6</sup> | 3           |                 |       |                                     |           |
|               |       |                                      | <b>16.5</b> |                 |       |                                     | <b>13</b> |

### SECOND YEAR - SOPHOMORE (21-22)

| Fall Semester |       |   |             | Spring Semester |       |   |           |
|---------------|-------|---|-------------|-----------------|-------|---|-----------|
| Dept          | Crse# | Course Name                             | Hrs         | Dept            | Crse# | Course Name                               | Hrs       |
| MAT           | 223   | Analytics & Calculus II <sup>5</sup>    | 4           |                 |       | Behaviorial Science Elective <sup>1</sup> | 3         |
| PHS           | 211   | Physics for Sci. & Engr. I <sup>4</sup> | 4           | PHS             | 212   | Physics for Sci. & Engr. II <sup>2</sup>  | 4         |
| CHE           | 321   | Organic Chemistry I                     | 4           | CHE             | 322   | Organic Chemistry II                      | 4         |
| BIO           | 205   | Cell Biology <sup>6</sup>               | 3           |                 |       | Other minor requirement <sup>6</sup>      | 3         |
| BPH           | 200   | Special Topics in Science               | 0.5         | BIB             |       | Bible Course                              | 2         |
| BIB           |       | Bible Course                            | 2           |                 |       |   |           |
|               |       |   | <b>17.5</b> |                 |       |   | <b>16</b> |

### THIRD YEAR - JUNIOR (22-23)

| Fall Semester |        |  |           | Spring Semester |       |                                      |           |
|---------------|--------|--|-----------|-----------------|-------|--------------------------------------|-----------|
| Dept          | Crse#  | Course Name                                  | Hrs       | Dept            | Crse# | Course Name                          | Hrs       |
| HIS           |        | History Elective <sup>1</sup>                | 3         | CHE             | 221   | Analytical Chemistry <sup>5</sup>    | 4         |
| CHE           | 331    | Biochemistry I <sup>6</sup>                  | 4         | CHE             | 332   | Biochemistry II <sup>6</sup>         | 4         |
| BIO           | 333    | Cell Biology & Molec. Gen. <sup>6</sup>      | 4         | COM             | 140   | Speech Communication <sup>1</sup>    | 3         |
|               |        | Other minor requirement <sup>8</sup>         | 3         | BPH             | 300   | Special Topics in Science            | 1         |
| BIB           | (4)346 | Christ. Evid. / Found. of Faith <sup>1</sup> | 3         |                 |       | Other minor requirement <sup>8</sup> | 3         |
|               |        |  |           | BIB             |       | Bible Course                         | 3         |
|               |        |  | <b>17</b> |                 |       |                                      | <b>14</b> |

### FOURTH YEAR - SENIOR (23-24)

| Fall Semester |       |   |           | Spring Semester |       |  |           |
|---------------|-------|---|-----------|-----------------|-------|--|-----------|
| Dept          | Crse# | Course Name                             | Hrs       | Dept            | Crse# | Course Name                                | Hrs       |
| CHE           | 421   | Quantum Chemistry <sup>5,7</sup>        | 4         | CHE             | 422   | Kinetics and Thermodynamics <sup>5,7</sup> | 4         |
|               |       | Critical/Creative Elective <sup>1</sup> | 3         | CHE             |       | UD Chem. Elective (or Bio) <sup>3</sup>    | 4         |
| CHE           |       | UD Chem. Elective (or Bio) <sup>3</sup> | 4         | BIO             | 444   | Biological Conc. of Origins                | 3         |
|               |       | Other minor requirement <sup>8</sup>    | 3         | BPH             | 400   | Science Seminar                            | 1         |
| BIB           |       | Bible Course                            | 2         |                 |       | Other minor requirement <sup>8</sup>       | 3         |
|               |       |   |           | BIB             | 495   | Values <sup>1</sup>                        | 3         |
|               |       |   | <b>16</b> |                 |       |  | <b>15</b> |

<sup>1</sup> Liberal Arts Core classes

<sup>2</sup> Needed if math ACS score is between 24-26

<sup>3</sup> Chemistry track need UD, biochem need either chem or bio (can be lower)

<sup>4</sup> Can be replaced with General Physics for biochemistry track majors

<sup>5</sup> Required only for chemistry track

<sup>6</sup> Required only for biochemistry track

<sup>7</sup> Only need one for biochemistry track

<sup>8</sup> Options if a student would like a minor

## ADDITIONAL ITEMS RELATED TO THE MAJOR

\*Students may substitute MAT 224 Analytics and Calculus III or upper-division mathematics courses for up to four (4) of the additional required credit hours. Students may also use CHE 498 or HON 498 Independent Study (must be chemistry or biology related) for up to three (3) of the additional required credit hours. Students completing the pre-engineering program may count ENS 231 Engineering Mechanics I and ENS 232 Engineering Mechanics II toward meeting the seven (7) chemistry elective hours.

**The following guidelines are important. Failure to follow these guidelines may delay graduation.**

1. Plan schedules carefully. Plan to fulfill prerequisites for future courses.
2. Do not alter the sequence of courses without consulting with your academic adviser as not all classes are offered every semester.
3. Before the enrollment period, check to make sure holds will not prevent you from registration.
4. Register for classes early during the registration period to secure classes.

**The Four-Year Degree Plan is a suggested plan of study. This plan does not replace the *Undergraduate Catalog*. The *Undergraduate Catalog* provides the official listing of program requirements.**

| 2020-21 Undergraduate Liberal Arts Core Requirements  |        |   |        |
|---|--------|---|--------|
| <b>I. Biblical Values</b>   |        | <b>B. Natural Sciences</b>  |        |
| BIB 121 <b>AND</b> 122 <b>AND</b> 346 <b>OR</b> 446   | 7      | BIO 100 <b>OR</b> BIO 105 <b>OR</b> BIO 110 <b>OR</b> BIO 111 <b>OR</b> BIO 112 <b>OR</b> BIO 211 <b>OR</b> CHE 121 w/CHE121L <b>OR</b> PHS 111 <b>OR</b> PHS 112 <b>OR</b> PHS 201 <b>OR</b> PHS 211   | 3 or 4 |
| <b>II. Basic Skills</b>   |        | <b>C. Arts and Humanities</b>   |        |
| <b>A. Written Communication</b>   |        | <b>1. History</b>   |        |
| ENG 101 <b>AND</b> ENG 102  | 6      | HIS 111 <b>OR</b> HIS 112 <b>OR</b> HIS 221 <b>OR</b> HIS 222 <b>OR</b> HUM399A <b>OR</b> POL 251   | 3      |
| <b>B. Oral Communication</b>  |        | <b>2. Creative Works</b>  |        |
| COM 140 Speech Communication  | 3      | ART 110 <b>OR</b> ART 201 <b>OR</b> ART 234 <b>OR</b> ENG 225 <b>OR</b> ENG 226 <b>OR</b> ENG 235 <b>OR</b> ENG 236 <b>OR</b> ENG 245 <b>OR</b> ENG 246 <b>OR</b> ENG 299A/399A <b>OR</b> MUS 110 <b>OR</b> MUS 214 <b>OR</b> PHI 243 <b>OR</b> PHI 245 <b>OR</b> PHI 246 <b>OR</b> THE 160 <b>OR</b> THE 265 <b>OR</b> THE 299A/399A | 3      |
| <b>C. Quantitative Reasoning</b>  |        | <b>3. Humanities Capstone</b>   |        |
| MAT 100 <b>OR</b> MAT 101 <b>OR</b> MAT 120 <b>OR</b> MAT 122 <b>OR</b> MAT 235   | 3 or 4 | BIB/HUM 495   | 3      |
| <b>III. Broadened Perspectives</b>  |        |   |        |
| <b>A. Behavioral Sciences</b>   |        |   |        |
| BIB/FAM 230 <b>OR</b> PSY 210 <b>OR</b> SOC 241 <b>OR</b> SWK 251   | 3      |   |        |
| Complete course names and descriptions for the liberal arts core requirements are located in the <i>Undergraduate Catalog</i> . |        |   |        |